

# WELCOME

Welcome to Perspectives 3 (PER3), an add-on to ProFantasy's Campaign Cartographer 3 Plus software (CC3+). Use PER3 to create stunning 3D views of your floor plans and underground areas, as well as small towns and villages.



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### License Agreement

Use of this software is determined by a license agreement you can view on the CD.

### Technical Support

Support is available from the Registered Users area of the ProFantasy website [profantasy.com](http://profantasy.com)

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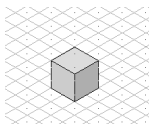
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# PERSPECTIVES 3

## Introduction

### Isometric Drawing



In an isometric drawing, vertical lines are drawn straight up the screen, and the horizontal lines in the width and depth planes are shown at 30 degrees to the horizontal. The lines parallel to these three axes are at their true lengths. Lines that are not parallel to these axes will not be of their true lengths.

### Getting Started

The information and tutorials contained in Perspectives 3 Essentials assumes a basic knowledge of CC3+. If you have not familiarized yourself with CC3+, doing so before you start Perspectives 3 will be beneficial.

### Tutorial

Finished examples of the tutorials are found in the Tutorials\Perspectives subfolder under the CC3+ program data folder.

**Perspectives 3** is an add-on for CC3+ that allows you to create 3D floorplans in a fixed view called **isometric** (see sidebar). You can create walls, floors and buildings, and add symbols to build your designs.

- You can draw a top-down 2D view of your floorplan or take an existing 2D drawing, then convert it into a PER3 view.
- You can draw floors, walls and rooms (floors and walls combined) directly in isometric view.
- You can add solids and holes using cones, cylinders, 3D boxes and polys.
- You can give 2D objects depth by extruding them.
- You can control the appearance of surfaces using predefined settings, and create your own.
- You can add a wide variety of symbols.
- You can create your own PER3 symbols.

## Using this Manual

*The Essentials* gives you enough to **get you started** without overwhelming you with details. It combines an overview of all the features with a tutorial. We assume that you have also read at least the CC3 Essentials document.


Items underlined in **bold text** are referring you to the side bar for definitions and additional information. Tool bar buttons, dialog box items and menu items are shown in bold text like this: **Next Bookmark** 📖.

## Getting to Perspectives 3


You can swap from CC3+ or any add-on to the PER3 menu by clicking the PER3 button on CC3+'s File toolbar.



## Starting a New Drawing

- 1 Click **New** .  
The **New Drawing Wizard** appears. Choose the map type **Perspectives**, then click **Next**.
- 2 Choose a **Map Style** based on the type of drawing you want to create.
- 3 Set the size of the map you want to create.
- 4 Click **Finished** and save your map.











### Can't see the Perspectives Toolbar?


The Perspectives 3 toolbar icons are usually found on the left of the interface screen. If you can't see them, select Tools  and ensure that Left toolbar 1 and 2 are ticked.

## Perspectives 3 Toolbar

The PER3 **toolbar** includes most of the tools and features you need to create your isometric floorplans.

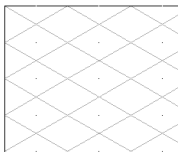
### Perspectives Toolbar

Perspective Settings			Draw Rectangular Floor
Draw Wall			Draw Room
3D Box			3D House
3D Projection			Solid Extrude
Symbol Catalog Settings			Symbol Style Toggle

Left-click on a button to choose the most commonly used option, right-click on a button to see a context menu of other tools. For example, right-click on **3D Box**  to see a menu with other solid shape tools such as Cylinders and 3D Polygons.

## Creating a Floorplan from Scratch

### Isometric Grid Overlay



This is the visible grid on PER3 templates.

CC3+'s Grid and Snap settings let you lock to the center and corner of each overlay square, making it easy for you to draw isometrically.

### Textures

Perspectives 3 comes with many detailed bitmap textures which will align to surfaces.

These are included in the drawing on a per-template basis, so you might not see all bitmap textures in one template.

### Hatching Styles

These are repeating patterns created out of CC3+ entities.

They align to surfaces to give a correct 3D appearance. You can create your own hatching styles.

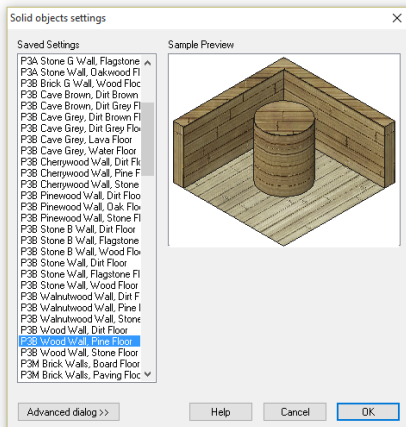
You can create PER3 drawings by adding floor surfaces and rooms directly to the **isometric grid overlay** on your template. We'll create a simple Inn floorplan for your bar room brawl.

## Choosing a Look

PER3 lets you create attractive textures for surfaces, and automatically shades them to create shadows.

- 1 Click **Perspective Settings** .


## Perspective Settings Overview



**Perspectives Settings** are pre-defined combinations of **textures**, color schemes and **hatching styles** used to create the walls, floors and solid shapes of your floorplan. When you use any of Perspectives 3's tools, their appearance is controlled by these settings. There are a number of predefined settings, and it's easy to create your own (see p. XX).

- 2 Click some settings to see the previews, then choose **P3B Wood Wall, Pine Floor**, and click **OK**.

## Adding Floors

**Rectangular Floor**  lets you add floor surfaces in isometric view. Right-click for a menu of **other floor types**.

- Click Rectangular Floor .

The prompt reads First corner:

- Click a point in the lower left corner of the screen.

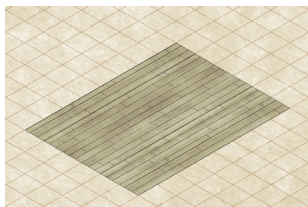
The prompt reads Second corner or enter length:

- Move the mouse towards the upper right corner (**east**) of the map, then type 40' and press ENTER.

The mouse movement tells CC3+ that you want the 40' length to extend in an easterly direction. The prompt reads Third corner or enter length[square]:

- Move the mouse 6 grid squares north, then left-click. (A right-click would have made the room square).

Each grid square is 5' wide, so you've completed a 40' by 30' floor.



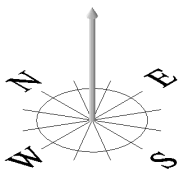
## Other Floor Types

Rectangular Floor
Circular Floor
Polygonal Floor
Regular Poly Floor
Make into floor

You can create almost any floor shape using these menu items.

**Make into floor** lets you make any enclosed shape into a floor.

## East



Our templates, symbols and examples assume that compass directions are as illustrated above.

## Adding a Wall

Although you can use the Room tool to create floors and walls in one, the walls at the front of the floor plan can hide the symbols behind, so it's often better to add the walls separately.

- Right-click **Draw Wall** . From the context menu, click **Wall, 1' thick**.

The prompt reads First end:

- Click on the north-west corner of the room.

The prompt reads Next node or enter distance (SHIFT – move handle) [done]:

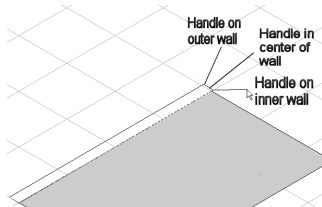
# PERSPECTIVES 3

We'd like the wall edge to run along the edge of the floor. At the moment, if you click, it would be the middle of the wall that aligns to the edge of the floor.

PER3 lets you change this in mid command.

- 9 Press and hold down SHIFT. Move the mouse.

You can see a line cursor that attaches to the



end of the wall. The cursor has three possible positions.

- 10 Move the mouse until the line cursor is attached to the inner edge of the wall. Lift your finger from SHIFT then move the mouse again.

The first point you clicked aligns so that the wall runs along the floor edge.

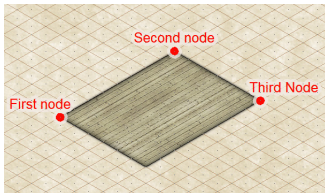
## Wall

- Wall, current thickness
- Wall, 1' thick
- Wall, 2' thick
- Wall, choose thickness
- Wall, wireframe

Right-click **Draw Wall** to see all the wall options.

Once you've chosen a wall thickness from the right-click menu and drawn a wall, use **Draw Wall** to draw walls of the same thickness.

Walls can also be used to create balconies (use a wide thickness with a very low height) and stairs (draw a series of walls with increasing height).



- 11 Click on the north-east corner of the room, then click on the south-east corner of the room. Right-click.

The prompt reads Height [n]:

- 12 Although you can just click a point to let CC3+ know what height the wall will be, for accuracy, type 10' and press ENTER.

You now have the start of a floorplan. You haven't drawn the two front walls which otherwise would hide most of the floor.

## Symbols Overview





PER3 comes with a wide range of symbols. The Bitmap A style duplicates most of those in DD3, while the Herwin

Wielink style is a completely new set. The vector styles duplicate the 2D symbols from the older Dungeon vector styles. Perspectives symbols come in two flavors, **free-standing** and **wall features**. Freestanding symbols are those such as furniture and trap doors that can be placed on floors; wall features symbols are those placed against walls such as doors and windows.

## Choosing your Symbol Catalog



You can choose your PER3 symbol catalog by clicking on one of the buttons on the **Symbol** toolbar (pictured above). Sometimes you will be given a choice of catalogs. Click on the one of your choice. You can swap between different styles of symbols by clicking **Symbol Style Toggle** . Clicking **Symbol Catalog Settings**  will let you select between all available catalogs for the current style.

## Choosing your Symbols

### 13 Click **Furniture** .

Scroll through the catalog. You can see a variety of Herwin Wielink-style (P3B) Perspective symbols.

### 14 Click P3B Stove E. Click the **Snap** button to un-depress it. This stops the cursor aligning to each snap point.

You can see the symbol at the cursor. Choose the symbol's orientation:

## Free-Standing

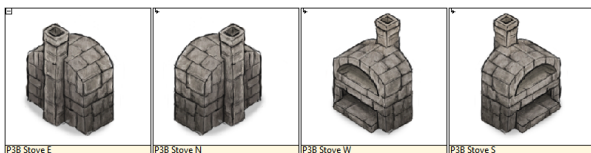
The free-standing symbols come in four or eight alignments.

Basically, you can align your symbol in the four compass directions. For some symbols (an upright barrel for example) this makes no difference. For others, such as a chair, this limits the angles at which the chair appears.

## Wall Features

The wall features symbols are depicted front on, and can align automatically to any wall by placing them against the base.

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- Press the **UP** arrow to make the symbol face North.
  - Press **DOWN** to make the symbol face South.
  - Press **LEFT** to make the symbol face West.
  - Press **RIGHT** to make the symbol face East.
  - Press the **TAB** key to cycle between each facing.
  - Alternatively, click on the **+** to see all four versions of the symbol and click one directly.
- 15 We want the fireplace on the north wall, so press the **DOWN** arrow to make the fireplace face south.
- 16 Click an insertion point on the base of the north wall near the center.
- 17 Add a few more symbols from this catalog –

## Insertion Point

For most symbols, the symbol origin is in the center of the base where the symbol would align with a wall.

For example, a chest would have its symbol origin in the center of the lower rear edge. This makes it much easier to get the correct insertion point when you place the symbol.

Where this doesn't make sense, for example stalagmites, the symbol origin is in the center of the symbol.



remember you can press arrow keys to realign the symbols before you place them.



## Varicolor Symbols



Some symbols have a variable color based around the current color. The main coloration will be the current color, the light and shade areas will be color numbers either side. You can tell these symbols because



they have a small square in the upper right corner with the current color in it. To use them, click the color indicator, and choose a color not in the top two rows of the color dialog box. You can then add the symbol to the drawing.

## Adding Doors and Windows



Wall features are flat symbols that change shape to match the angle of the wall that they are aligned to. They are also called “shearing symbols”. They fix to the base of such walls. Doors

are placed directly on the wall base, others such as windows will offset upwards after you’ve clicked a wall base.

- 18 Click **Wall Features** .
- 19 Click on **P3B Sgl Door Rfd Wood** – the third door symbol.
- 20 Click **Zoom Window**  and zoom in to the north wall.
- 21 Move the dynamic cursor very close to the wall base.

It stretches and aligns to the wall base.

- 22 Click to place it.

## Color Numbers

CC3+’s color scheme is based on a 256-color palette. Each color is assigned a number from 0 to 255 reading left to right on the color palette.

The first 32 colors are an assortment of useful colors forming a mini-palette; the remaining colors are in shades of 16 colors. It is these shades which are used with varicolor symbols and PER3 color schemes.

## Dynamic Cursor

If your wall features symbols are slow and difficult to place, you can hide layers, particularly the HATCHING layer.

If they are still too slow, right-click at the symbol cursor and deselect Smart Tracking when you are placing a symbol.

They’ll still align, but you won’t see the cursor locking to the wall base.

## Offset Symbols

These are symbols such as windows that displace vertically from the wall base once you have clicked on it.

Some wall features symbols are not shearing or offset symbols, for example, the flaming sconces.

Only symbols that lie flat against the wall will work in this fashion.

- 23 Click P3B Window Stnd Glass, the third window symbol. Click a point on the east wall, to the right of the door base.

The prompt reads  
Offset from place point [40]:

- 24 The **offset symbol** now moves perpendicular (vertically up) the wall base on a cursor. You could click a point, but instead type 3.



The window appears three feet above the floor.

- 25 Click a point on the right of the door base.

The prompt reads Offset from place point [3]

- 26 Right-click to accept the default height above the floor.

You could continue placing windows above the floor base at this fixed height.

## More to Try

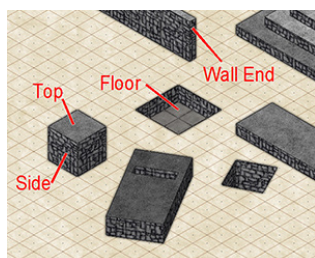
Now you've got going, here are a few more things to try:

- Use the other symbol catalogs and add more wall features.
- Add more floors: right-click **Rectangular Floor** and try out **Polygonal Floor** to make corridors and odd-shaped rooms.
- Click the Layer indicator and try hiding or showing the various Walls, Floors and Tops layers.

## Making Solid Shapes and Holes

Perspectives 3 includes some solid entities to create platforms, stairs, balconies, towers and holes. Cylinders, 3D Boxes and 3D Polys and **other solids** are all available.

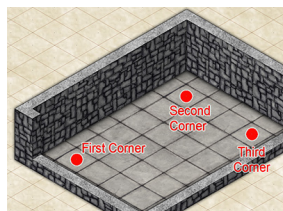
After you've drawn the base of a solid, you are asked for its height – if you select a point above the base, you will get a solid, if you select a point below the base, a hole.



### 3D Boxes

To show the use of solids, we are going to add a raised pool to an existing room using 3D Box.

- 1 Open Tutorial04.fcw. This shows a room drawn in the **P3B Stone Wall, Flagstone Floor** style.
- 2 Click **Perspective Settings**. Click **P3B Brick Wall, Water Floor**. Note that the floor area thumbnail looks like a watery surface.
- 3 On the Perspectives toolbar click **3D Box**.  
The prompt reads First Corner:



- 4 Click the first point for the box about one-and a half grid squares away from the north-west corner of the room.

The prompt reads Second corner or enter length:

- 5 Click a point in the north-east corner of the room.  
The cursor should be parallel to the north wall.
- 6 The prompt reads Third corner or enter length

### Other Solids

Other solids are available, but these are currently beta versions. They do not all work properly with hatching and aligned bitmap fills. Type in their text equivalents to use them – but remember they are betas.

We recommend that you use them with a Perspective Setting that does not have a hatch or bitmap fill pattern (for example any of the "Simple" Perspectives settings).

Solid	Text Equivalent
Pyramid	IPYRAMID
Cone	ICONE
Sphere	ISPHERE
Spherical section	ISPHERA
Slope	IBOXA

## Floor Level

If you want to work on a horizontal surface that is not at floor level, you have three choices:

- Work by eye, that is, guess.
- Work at floor level, then move the entities to the correct height (a move up or down in PER3, is a move up or down the screen).
- Move the entire snap grid upwards. Right-click the Grid button then edit the current grid settings. Increase or decreasing the Y value of the grid center to change the height.

[square]:

- Click the final point for the room near the south-east corner.

The prompt reads Height or Depth[6]:

- Type 2' and press enter for a 2' high raised area.

## 3D Regular Polygon

Now we'll make an indented area filled with water to go on the raised floor.

- Click **Zoom Extents**  and then **Zoom Window** . Choose an empty area to one side of the floor plan.

We are going to draw this hole at floor level, then move the center over the raised area.

- Right-click **3D Box** . Click **3D Regular Poly.**

The prompt reads Number of nodes:

- Type **8** for an octagonal hole. Press ENTER.

The prompt reads Center:

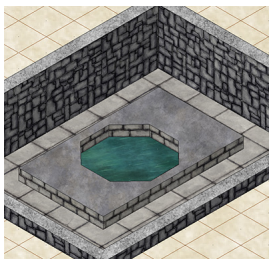
- Click a point on the corner of a grid square.

The prompt reads First Corner (or enter distance):


- Click a point two grid squares away.

The prompt reads Height or depth:

- Type **-2** and press ENTER for a 2' gap between the edge and the surface of the water.





You've drawn the pool. We'll move it by eye.

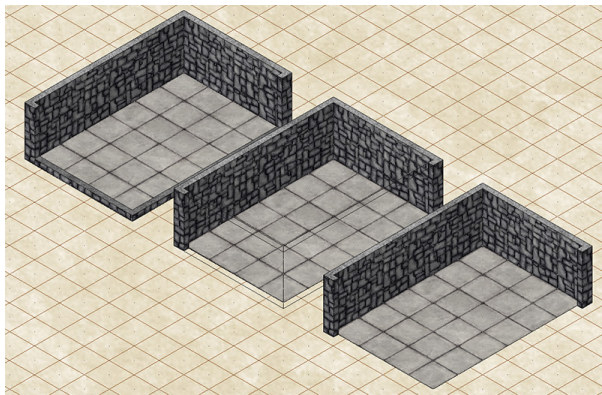
- Click **Move** . Click **Snap** then select and move the pool across to the surface.

## Adding Rooms

PER3 provides a shortcut for adding rooms with walls included to your drawings. The disadvantage of this is that you can't leave gaps for corridors or doors. The advantage is that rooms are quick and easy to draw. If you right-click, you can choose between rooms of the current wall width, and setting your own wall thickness.

When you add a room, you draw the floor, then type or click a point for the wall height.



- You can add a square or rectangular room by clicking **Rectangular Room** .
- You can add polygonal, circular or regular polygonal rooms by right-clicking **Rectangular Room** .
- By choosing **Room Options** from the right-click menu you can decide how PER3 draws facing walls, making them lower, wireframe or not there at all. This will allow you to better show the interior of the room.



### Wall Width

PER3 remembers the current wall width and uses it for Wall and Room commands.

When you first use a wall or room command, right-click either button and click a Choose Width option.

After that it's very quick to add walls or rooms of the same width – left-click Wall  or Room  for an entity of the current wall width.

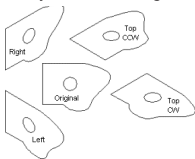
## 3D Projection

3D Projection takes a flat shape and projects it into isometric view, as if it were viewed from above or from the side.

It's mainly used for converting existing floor plans to isometric view ready to be made into a floor, but you can also use it for creating symbols.

### Projection Dialog box

- If you are converting



a floorplan with North straight up the screen, choose **Top CCW** (Counter clockwise).


- If you are converting a floorplan with North left across the screen, choose **Top CW** (Clockwise).
- If you want to project onto a North or South wall, choose **Right**. If you want to project onto an East or West wall, choose **Left**.

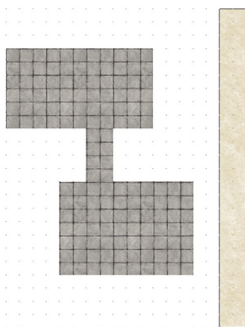
## Making a Map from an Existing Plan View

You may find it easier to draw your floor plan from above, and then convert it into a PER3 map. PER3 provides tools to convert these plan views into isometric ones. This technique, with a bit of work, can also be used to convert your existing CC3+ and DD3 drawings into PER3 floor plans.


### Drawing the Floorplan


In this example, we can draw a simple plan view straight onto the PER3 template. We then use **3D Projection** to convert it into an isometric floor.

- Click **New** , choose the map style **Perspectives** and **Decide settings myself**. Click **Next** and choose the map style **Perspectives Dungeon Herwin Wielink**. Click **Next** again, set the size of your map to 160' by 120' and then click **Finished**. Save your map (Tutorial08.FCW).



- Right-click the **Snap** button, then select the **5' Square** grid. When you draw in plan view, you need a square grid.

- Click **All Drawing Tools**  and choose one of the **Floor** tools. Click points to form a floor plan.

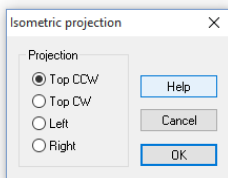
- Use **Move**  to move the floorplan off to one side of the drawing area.

- Click **3D Projection** .

You can see the Isometric **Projection dialog box**.

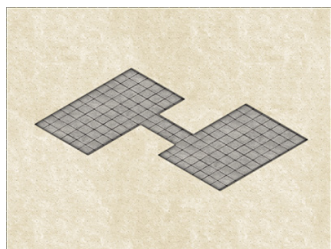
- Click **Top CCW**. Select the polygon.

In almost every case where



you are creating an isometric floorplan, you will use the **Top CCW option**.

The prompt reads Iso view origin:



7 Click a point on a corner of your **polygon**.

You can see a dynamic cursor of the isometric version. The prompt reads To:


8 Right-click the **Snap** button, then select the **5' Perspective** grid.

We want to align the floor plan to the isometric grid.

9 Click a point on the grid to place your basic floor plan.

## Converting DD3 Flooplans

You can convert floor plans created with DD3 or the cut-down dungeon style commands in CC3 into isometric view. It's fairly straightforward, but you will probably need to refer to this example.

- 1 Click **New** , choose the map style **Perspectives** and **Decide settings myself**. Click **Next** and choose the map style **Perspectives Dungeon Herwin Wielink**. Click **Next** again, set the size of your map to 160' by 120' and then click **Finished**. Save your map (Tutorial11.FCW).
- 2 On the **Edit** menu, click **Insert File**.
- 3 Click **Dungeon.fcw** in the **Tutorials\Perspectives** folder. Click a point above the top of the map border.

First, we place the dungeon map in a new, blank map.



4 Click the Layer indicator, and thaw all layers.

## Polygons

You can make floors with "holes" in them by projecting the hole shape, then change the fill style and color to match the background style (usually the P3B Parchment bitmap fill).

You can also project multipolies, though you can't extrude them.

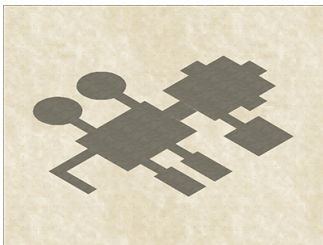


- 5 Click **Erase**  and erase all of the new image except the rooms, corridors and symbols.
- 6 Click **3D Projection** . Select the **Top CCW** option.  
We want to project only the gray background on BACKGROUND (FLOOR 1) so that we have only the floor of our isometric dungeon.
- 7 Click two points forming a window around the entire dungeon, **And** (Both), Layer, BACKGROUND (FLOOR 1).  
The dungeon is ready to be placed.
- 8 Click a point on the template.

## And


When you are selecting, you can right-click at any time to see additional selection options.

The Combine submenu gives you the option to restrict your selection to entities that pass two tests, in this case, entities you have selected in the window which are also on the BACKGROUND (FLOOR 1) layer.



You can refer to the dungeon to add symbols. You could even explode, then project, the symbols onto the isometric version for more precision.


## Converting Geomorph Floorplans

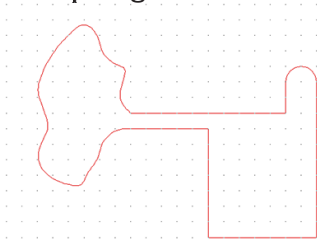
Some DD3 floor plans are made from plugging geomorph symbols together. You can convert these into PER3 floorplans as in the example above, but first you need to use **Explode**  to convert the symbols into their constituent parts. Then you can just follow the instructions in the previous example to make a floorplan.

## Converting More Complex Shapes




If you are using Hollow or Solid filled outlines of your non-isometric dungeon, you can use the **Make Into Floor** command to turn them into your current floor style after projecting them. But **Make Into Floor** can only convert polygons or projected circles into filled floors. To deal with this limitation, PER3 provides you with the tools to make complex shapes into polygons.






- 9 Click **New** , choose the map style **Perspectives** and **Decide settings myself**. Click **Next** and choose the map style **Perspectives Dungeon Herwin Wielink**. Click **Next** again, set the size of your map to 160' by 120' and then click **Finished**. Save your map (Tutorial15.FCW).
- 10 Right-click the **Snap** button, then select the **5' Square** grid.




We've turned snap on to ensure that the shape you are about to create is enclosed.

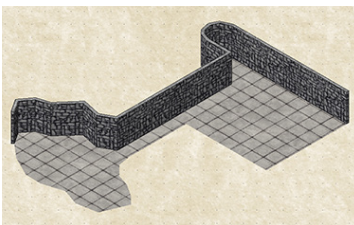
- 11 Use **Path** , **Arc** , and **Smooth Path**  to create an enclosed shape.

- 12 Right-click **3D Projection** . Click **Convert to Polygon**. Select the shape you've drawn.
- 13 Click **3D Projection** . Select the **Top CCW** option.
- 14 Right-click **Rectangular Floor** , then click **Make Into Floor**. Select the floor plan.

## Adding Walls to Curves

You need to add walls to the completed floors. This process was described on p. 4. This section shows you how to add walls around a curve.

- 15 Right-click the **Attach** button. Click **Nearest Endpoint**. Click **Attach** enabled.
- 16 Click **Wall, current thickness** . Press **SHIFT** and move the drawing handle to the inside edge of the wall.
- 17 Where the wall is curved, click points at regular intervals along



### Enclosed shape

An enclosed shape has an unbroken outline with no overlaps. You can ensure that your ends connect by:

- Using **Snap** as in this example,
- Right-clicking **Attach** and choosing **Nearest Endpoint**,
- Using the **Endpoint** modifier,
- Using the various **Trim** commands to ensure that everything lines up.

the curve. When you reach a straight section, click near its endpoint.

## Creating Solids from Projected Shapes

### Extrusion


Extrusion is the process by which a 2D entity is converted into a solid shape. Extrusion adds an extra dimension to 2D entities. Think of this as moving the entities through space, leaving a 3D trail behind them.

- **Solid Extrusion** lets you extrude vertically, creating a solid entity
- **Wireframe Extrusion** lets you extrude in any direction. It is used for making PER3 vector symbols.

You can extrude shapes that you have drawn straight onto a Perspectives grid. Alternatively, you can extrude shapes created using 3D Projection.

Any closed shape can be extruded, whether a single entity like a polygon, or any enclosed chain of entities.

You can create solid shapes from the projected shapes you make. This enables you to create shapes that are hard to make with the usual solids such as 3D Box and 3D Polygon. This process is called **extrusion**. We'll use the shape in the previous section as an example.

1 Open Tutorial18.fcw. Click **Solid Extrude** .

2 Select the shape on the grid.

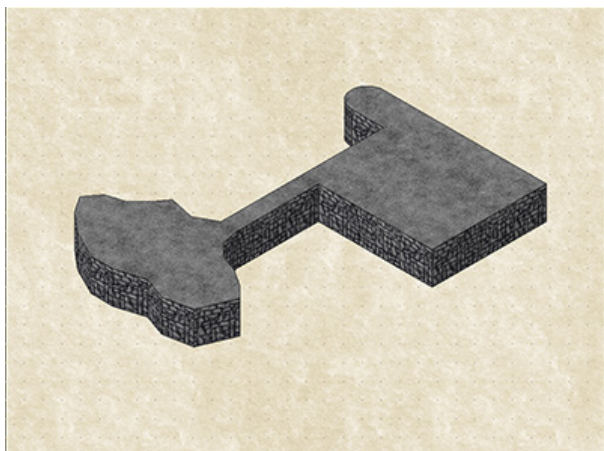
The prompt reads Extrude from:

3 Click a point.

The prompt reads Extrude to or enter distance [prior]:

4 Type **10** and press **ENTER**.


The floor extrudes to give you a solid shape. Unlike with solids, a downward extrude does not give you a hole.




## House Creation

PER3 also lets you create outdoor scenes. You can make buildings with the **House** command.

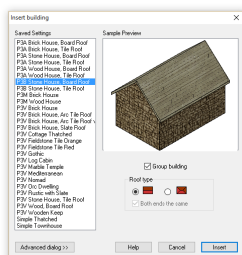
### A Basic House

- 1 Click **New** , choose the map style **Perspectives** and **Decide settings myself**. Click **Next** and choose the map style **Perspectives Dungeon Herwin Wielink**. Click **Next** again, set the size of your map to 160' by 120' and then click **Finished**. Save your map (Tutorial20.FCW).



- 2 Click **Perspective Settings** . Choose **P3B Stone Wall**, **Wood Floor** and click **OK**.

- 3 Right-click **Current 3D House** .

The dialog box shows a selection of house settings, a preview of the current house settings and some roof type options.

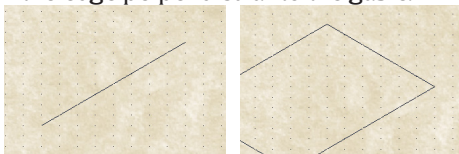


#### Roof Types

The roof types are gabled  and hip .

- 4 Click **P3B Stone House, Wood Roof**. Click the first **roof type**. Click **Insert**.

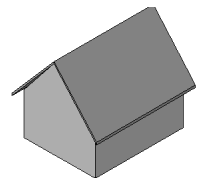
The prompt reads First Corner:. You'll be drawing the edge perpendicular to the gable.



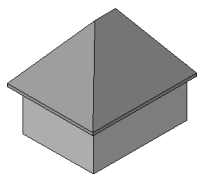
- 5 Click a point.

The prompt reads Second corner or enter length[prior]:

- 6 Click another point about 40 feet (8 grid squares) away to the east.



Gabled

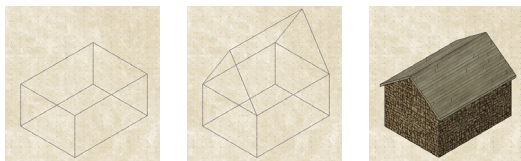


Hip

The prompt reads Third corner or enter length[square]:

- 7 Move the mouse to the north a little, then type 30.  
If you had right-clicked, you would have a square based house.

The prompt reads Wall height:



- 8 Click a point about 20 feet up.  
The prompt reads Roof Height[12']:

## Defaults

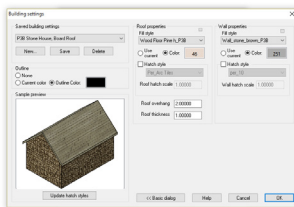
The house command has lots of default options shown at the command prompt. As always, you get the default values by right-clicking. This makes it very easy to create many houses with a similar size and shape.

- 9 Right-click to accept the **default** roof height (12 feet).

## A House with an Extension

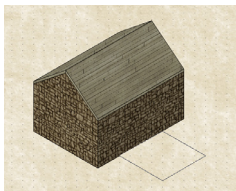
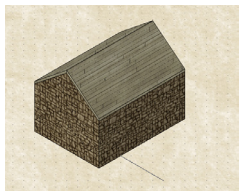
You can use the Hip Roof option to add an extension to a house. For this to work, you need a house which does not have an overhanging roof.

- 10 Depress the **Snap** button.
- 11 Right-click **Current 3D House** . Click **Advanced dialog >>**.
- 12 Set Roof Overhang to 0. Click **Insert**.
- 13 Draw a house similar to the one in the previous example.
- 14 Right-click **Current 3D House** .



- 14 Click **Hip Roof** and uncheck **Both Ends the same**.

You need to draw the extension away from the house.



- 15 Click a point on the edge of the house where it meets the floor. Click another point two squares to the south. Click a point two squares to the east.

You've formed the footprint of the extension.

- 16 Right-click to accept the default wall height. Right-click to accept the default roof height.

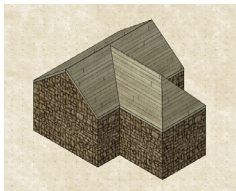
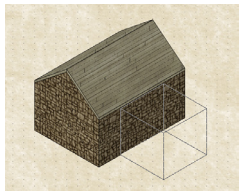
The prompt reads Left distance [10] (SHIFT allow outside):

- 17 Click **On** . Press and hold down **SHIFT**. Move the cursor on to the top edge of the roof, keeping **SHIFT** down and click.

## SHIFT

If you press SHIFT it will let the hip roof overhang the wall so that you can make extensions and connections.



Otherwise, PER3 prevents you from overhanging, as this would make an odd-looking roof under normal circumstances.



The prompt reads Right distance [symmetric] (SHIFT allow outside):

- 18 Release SHIFT. Click a point to form the other end of the hip roof.


## More to Do

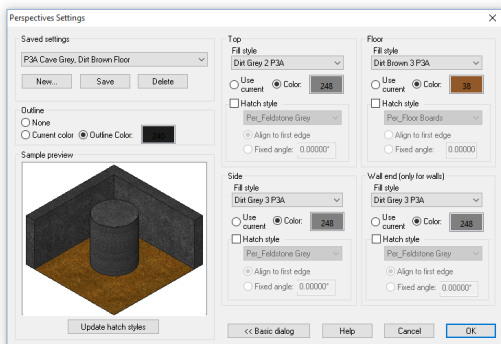
- Click **Wall Features**  and add doors and windows.
- Click **Outdoor**  and add some symbols.
- Create a map of the interior using **Floors** and **Walls**.

## Perspective Settings

As described on page 22, the color and pattern of PER3's entities are controlled by the current Perspectives Settings. To choose one of the pre-existing settings, just click on Perspectives Settings and choose from the list.

## Creating Your Own Settings

- 1 Click **New** , choose the map style **Perspectives** and **Decide settings myself**. Click **Next** and choose the map style **Perspectives Dungeon Bitmap A**. Click **Next** again, set the size of your map to 160' by 120' and then click **Finished**. Save your map (Tutorial24.FCW).



### Color Option

While the color set here will only show in the drawn objects if the fill style is solid or hollow, it is still useful to set with bitmap fill style.

- You can select entities by color if you are looking to affect only walls or only floors.
- If you use the Perspective setting in a map where the bitmap fill styles are not defined, they will still look okay in solid colors.

- 2 Click **Perspectives Settings** .

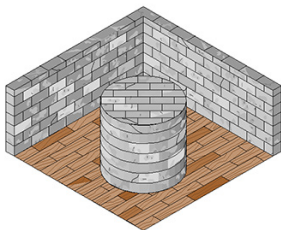
Creating a new setting is just a matter of choosing the options on this dialog box, then saving the results.

- 3 Click **New** to create a new setting and type **P3A Marble Palace**.
- 4 For the sections, Top, Side and Wall end choose the bitmap fill style **Tile Marble White P3A** from the dropdown list, and the color **15** (White) for the Color option.

- 5 For the section Floor choose the bitmap fill style **Tile Marble Black P3A** and the color **0** (Black).
- 6 Leave the **Hatch Style** and **Outline** options as they are.
- 7 Save the new setting. You can now use it to draw rooms, walls and other 3D objects.

## Hatch Styles

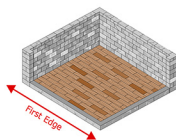
Each Perspectives Setting can have four different hatch styles set. Hatch styles are patterns that are drawn on to the surfaces of solid shapes to give them texture. In PER3 they are mainly used with the vector settings starting with P3V (for Per 3 vector) and P3M (for Per 3 mono).



They make your vector surfaces appear to be brick walls, stone, wood or even lava. You can choose different textures for top surfaces, wall ends, floors and vertical surfaces.

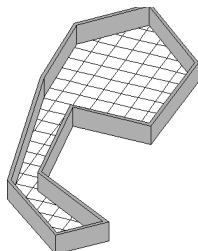
- 8 To use a hatch style on a surface, check the **Hatch Style** option in the relevant section.
- 9 Choose a hatch style from the dropdown list.
- 10 Choose **Align to First Edge** or **Fixed Angle**.

### Align to First Edge



If you set the Align to First Edge option, when you use the Floor or Room tools, the pattern aligns to the first two points you click. This is useful, for example, if you want floorboards that align with the edge of a room.

### Fixed Angle



If you use the fixed angle option, the pattern always aligns to a particular direction. This is useful for hex or square grids with a fixed direction.

## Further Information

*The Essentials* covers most of what you need to know to use Perspectives 3. Other topics covered in the Help and in the full manual include (Help index entries underlined) are

- Creating hatch styles
- Creating Perspectives Symbols
- Cylinder
- 3D Circle, 3D Line
- Add Symbol Info
- Beta solids (Solids and Holes)